CLAIMS

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

Sub A1

1. A method for designing or deploying a communications network, comprising the steps of:

providing a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment;

providing performance attributes for a plurality of system components which may be used in said physical environment, a number of said system components having associated with them frequency dependent characteristics of said system component;

selecting specific components from said plurality of system components for use in said computerized model;

representing said selected specific components in said display;

running prediction models using the computerized model and said performance attributes to predict performance characteristics of a communications network composed of said selected specific components, said prediction models utilizing said frequency dependent characteristics in calculations which predict said performance characteristics of said communications network.

2. The method of claim 1 wherein said frequency dependent characteristics define electrical properties of said system components at at least two different frequencies.

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3. The method of claim 1 further comprising the step of generating a bill of materials containing cost information for said selected specific components utilized in said communications network.

Sub B4

4. The method of claim 1 wherein said cost information comprises a maintenance schedule for selected specific components.

5. The method of claim 1 wherein said display is three dimensional.

6. The method of claim 1 wherein said system components allow converting between radio frequency and optical frequency.

7. The method of claim 1 wherein said system components allow converting between optical frequency and baseband frequency.

8. The method of claim 1 wherein said system components allow converting between radio frequency and baseband frequency.

9. The method of claim 1 further comprising the step of identifying errors in physical media connections for two or more specific components selected in said selecting step.

Sub A2

10. An apparatus for designing or deploying a communications network, comprising:

a means for providing

(I) a computerized model which represents a physical environment in which a communications network is or will be installed, said computerized model providing a display of at least a portion of said physical environment, and

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(II) performance attributes for a plurality of system components which may be used in said physical environment, a number of said system components having associated with them frequency dependent characteristics of said system component;

a means for selecting specific components from said plurality of system components for use in said computerized model;

a means for representing said selected specific components in said display; and

a means for running prediction models using the computerized model and said performance attributes to predict performance characteristics of a communications network composed of said selected specific components, said prediction models utilizing said frequency dependent characteristics in calculations which predict said performance characteristics of said communications network.

11. The apparatus of claim 10 further comprising a means for generating a bill of materials containing cost information for said selected specific components utilized in said communications network.

12. The apparatus of claim 11 wherein said cost information comprises a maintenance schedule for selected specific components.

13. The apparatus of claim 10 wherein said display is three dimensional.

14. The apparatus of claim 10 further comprising a means for identifying errors in physical media connections for two or more selected specific components.